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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/628,553

07/29/2003

Keisuke Imai

1614.1352

4742

21171

7590

09/14/2006

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EXAMINER

PAYNE, DAVID C

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,553

Applicant(s)

IMAI ET AL.

Examiner

David C. Payne

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 7 and 10 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 5/1, 5/4, 6/1, 6/4, 8, 9, 11/7, 11/10, 12/7, and 12/10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ooi et al. US 20010007508 (Ooi).

Re claims 1, 4, 7 and 10 Ooi disclosed

FIG. 1 is a diagram showing the basic construction of a first optical modulation apparatus according to the present invention. Shown in FIG. 1 are a semiconductor laser (DFB-LD) 51, an optical modulator (e.g., an MZ-type optical modulator) 52 the voltage--optical output characteristic whereof varies periodically, a drive signal generator 53 for generating electrical drive signals SD, SD' that drive the optical modulator by an amplitude $2 \cdot V_{\pi}$ between two light-emission culminations A, A or two light extinction culminations B, B of the voltage--optical output characteristic, a low-frequency oscillator 54 for generating a prescribed low-frequency signal, a low-frequency superimposing unit 55 for superimposing the low-frequency signal on the drive signal SD, an optical branching unit 56 for branching

an optical signal output by the optical modulator 52, a low-frequency signal detector 57 for detecting the low-frequency signal component contained in an optical signal output by the optical modulator and detecting operating-point drift of the optical modulator based upon the low-frequency signal component, and an operating-point control unit 58 for controlling the position of the operating point by controlling the bias voltage of the optical modulator in dependence upon the direction of drift of the operating point of the optical modulator, e.g., paragraph 102.

[When the optical modulator 52 is driven by the electrical signal having the amplitude $2 \cdot V_{\pi}$, the low-frequency superimposing unit 55 superimposes a low-frequency signal SLF on the electrical drive signal SD output by the drive signal generator 53. The low-frequency signal detector 57 detects the low-frequency signal component contained in the optical signal output by the optical modulator 52, and the operating-point control unit 58 discriminates the direction of operating-point drift based upon this detected low-frequency signal component and controls the bias voltage of the optical modulator 52. More specifically, the operating-point control unit 58 controls the operating point in such a manner that the center level of the electrical drive signal (the modulator driving voltage signal) applied to the modulator will coincide with the level of the extinction culmination B of the characteristic curve and the levels on both sides of the electrical drive signal will coincide with the light-emission culminations A, A of the characteristic curve, e.g., paragraph 103.

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Allowable Subject Matter

4. Claims 2, 3, 5/1, 5/4, 6/1, 6/4, 8, 9, 11/7, 11/10, 12/7, and 12/10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

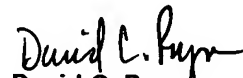
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7:00a - 4:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dcp


David C. Payne
Primary Examiner
AU 2613